

WHAT IS CLAIMED IS:

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1. An image processing apparatus, comprising:
an error adding unit for correcting the color
of each pixel of an input image in accordance with an
error data;

an output color selector for converting the
color corrected by the error adding unit to a single
color selected from among a plurality of outputtable
colors of the image processing apparatus;

an error calculator for generating the error
data for diffusing the color error converted by the
output color selector to pixels peripheral to a target
pixel, and contributing the error data to the error
adding unit; and

a noise overlay unit for superimposing noise on
the input image and provided as a front stage to the
error adding unit.

2. An image processing apparatus according to
claim 1, wherein color of each pixel of an input image is
corrected by vector error diffusion method.

3. An image processing apparatus according to
claim 1, wherein the noise is color data having relation
to the colorimetric value of each outputtable color.

4. An image processing apparatus according to
claim 1, wherein the noise is selected so that the total

sum of the relative amount of overlay noise is zero relative to the colorimetric value of each outputtable color.

5 5. An image processing method, comprising steps of:

superimposing noise on an input image;
correcting the color of each pixel of the noise overlaid input image in accordance with an error data;
converting the corrected color to a single color selected from among a plurality of outputtable colors;

10 generating the error data for diffusing the error generated when selecting the outputtable color of the target to pixels peripheral to the target pixel; and
15 contributing the error data to said step of correcting.

20 6. An image processing apparatus, comprising:
correcting means for correcting the color of each pixel of an input image in accordance with an error data;

converting means for converting the color corrected by said correcting means to an outputtable color;

generating means for generating the error data
for diffusing the color error converted by said
converting means to pixels peripheral to a target pixel;
contributing means for contributing the error
5 data to said correcting means; and

superimposing means for superimposing noise on
the input image and provided as a front stage to said
correcting means.

7. An image processing apparatus, comprising:
10 superimposing means for superimposing noise on
an input image; and

correcting means for correcting color of each
pixel of the image on which noise is superimposed by
vector error diffusion method.

8. An image processing apparatus according to
15 claim 7, wherein the noise is color data having relation
to the colorimetric value of each outputtable color of
the image processing apparatus.

9. An image processing apparatus according to
20 claim 7, wherein the noise is selected so that the total
sum of the relative amount of overlay noise is zero
relative to the colorimetric value of each outputtable
color.